

REMARKS

Specification

The Examiner objected to the amendment to the specification made in the Amendment filed October 28, 2004 as introducing new matter into the disclosure and required that the new matter be canceled. By this Amendment, Applicants have canceled the new material added to the paragraph beginning at page 5, line 10 wherein the new matter stated "Preferably, the velocity . . . 10 to 30 meters per second" has been canceled.

Rejection of Claims Under 35 U.S.C. §112, First Paragraph

Claims 3-4, 11-14 and 16-17 stand rejected under 35 U.S.C. §112, first paragraph for alleged failure of the written description to support the limitations "wherein said mist is removed . . . in said exhausting steps". The Examiner requested Applicants to point out the support in the specification by page and line numbers.

The Examiner's attention is directed to page 5, line 10 to page 6, line 14 of the specification and Figs. 2(A) and 2(B) wherein the cyclone-type mist separator therein described indicates that the mist removal means corresponds to the inner cylinder 26 of the cyclone separator and the liquid waste outlet which drains mist removed by the removal means corresponds to the liquid waste outlet 24. In addition, another liquid waste outlet is installed at the rear stage of the mist removal means corresponding to the liquid outlet 25.

In the filter-type mist separator described from page 6, line 15 to page 7, line 28 of the specification and Fig. 3 thereof, the mist removal means corresponds to the

filters 32 and 33 thereof and the liquid waste outlet, which drains mists removed by the removal means, corresponds to the part at the flow direction shown as “from exhaust gas washing tower 13”. The liquid waste outlet itself, however, is not illustrated in Fig. 3 for simplicity. Moreover, another liquid waste outlet installed at the rear stage of the mist removal means corresponds to the liquid outlet 36.

Accordingly, it is submitted that the above-identified portions of the specification and the drawings fully support the limitations “wherein said mist is received . . . in said exhausting step.

Rejection of Claims Under 35 U.S.C. §112, Second Paragraph

Claims 3-4, 11-14 and 16-17 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite in that it allegedly is unclear if the decomposition products in the two steps defined in these claims are the same products are not.

Claims 3-4, 11, 13 and 17 have been amended to make it clear that in the first step at least part of the decomposition products from gas washed in the washing step are removed whereby a waste including a mist containing PFC decomposition products remains after removal of the at least part of the decomposition products. It is now clear that the mist removed from the waste remaining after the washing removes PFC decomposition products not removed by the first step.

Claims 3, 4, 11 and 13 also have been amended to call for “decomposing a toxic component produced by said decomposition of PFC by making said toxic component contact with a toxic component removing catalyst provided at the rear stage of said PFC decomposing process”.

It is therefore submitted that the independent claims 3-4, 11, 13 and 17 now meet all the requirements of 35 U.S.C. §112, second paragraph.

Rejection of the Claims Under 35 U.S.C. §103(a)

Claims 3-4, 11-14 and 16-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 885 648 in view of either JP 11-216455 or Lang et al., U.S. Patent No. 6,235,256. These claims also stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kanno et al., U.S. Patent Publication No. 2001/0001652 in view of either JP '455 or Lang et al. '256. As the Examiner noted, Kanno '652 is the U.S. counterpart of EP '648.

These rejections are traversed as follows.

Patentability of the Claims over the Cited Prior Art

A significant feature in the present invention as now claimed is to remove decomposition products through two state of treatments, wherein at least part of the decomposition products generated from the decomposition of PFC are removed first by washing and then mists containing decomposition products not removed by washing are removed together with the decomposition products dissolved therein or accompanying the mists.

In the present invention as now claimed, the mist removal device removes almost all the mists remaining after the decomposing and washing steps. The removed mists are drained through a first liquid waste outlet as they gather in the form of liquid. Another liquid waste outlet is installed at the rear stage of the mist removal device to drain the standing liquid pooled in the mist removal device due to a time-developed accumulation of a small amount of mists adhered on the mist

removal device surviving through the mist removing treatment. Thus, water accompanying the mist-removed gas can be removed at a higher yield, and thereby the corrosion of the exhaust blower or exhaust pipe is largely reduced.

With respect to the cited references relied upon by the Examiner, Applicants comments on EP 0885648, JP '455 and Lang's are as have been stated in the previous reply to the last Office Action, filed June 23, 2005 and are incorporated herein by reference.

The newly cited reference US 2001/0001652 describes the same features as those defined in EP 0885648 together with a method of converting fluoride (F) into hydrogen fluoride (HF) by contacting a fluorochemical like BF_3 with steam in the presence of a catalyst comprising at least one of alumina, titania, silica, zirconia. The reference further states that any one or more substances selected from among Si, MG, ZR, W, Sn, Ce, Mn, Bi, Ni, P, and B can be used as the catalyst in this processing.

This reference however neither describes nor suggests any features such that a gas after the PFC decomposition treatment is washed with aqueous alkaline solution, then the washed-gas undergoes removal of mists involved therein. In contrast to this, the present invention has been made based on a new finding in a case where a washed-gas does not undergo mist removal treatment therefrom. Therefore, the present invention is not such an invention that a person skilled in the art can easily derive from the art defined in this reference in view of either JP '455 or Lang '256.

In view of the foregoing amendments and remarks, Applicant contends that the above identified application is now in condition for allowance. Accordingly, issuance of a Notice of Allowance is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. NIP-198).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

A handwritten signature in cursive script, reading "Gene W. Stockman", is written over a horizontal line.

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